

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Previously Presented) The file management apparatus of Claim 32 further comprising:  
  
an access request receiving unit operable to receive a segment access request specifying a  
segment name;  
  
a position information read unit operable to read, from the position information storage  
unit, a piece of position information corresponding to the segment name specified  
in the segment access request; and  
  
a segment access unit operable to access a segment in the file storage unit by referring to  
the read piece of position information.
2. (Previously Presented) The file management apparatus of Claim 32, wherein the piece of  
numerical information contained in each piece of data stored in the file storage unit is a  
timecode, the file management apparatus further comprising:  
  
an access request receiving unit operable to receive a segment access request specifying a  
segment name;  
  
a position information read unit operable to read, from the position information storage  
unit, a piece of position information corresponding to the segment name specified  
in the segment access request; and  
  
a segment access unit operable to access a segment in the file storage unit by referring to  
the read piece of position information.

3. (Original) The file management apparatus of Claim 2, wherein  
each piece of segment position information includes (1) an address indicating a file start storage position of a file to which the segment belongs, and either (2-1) (a) an address offset indicating a size of a portion between the file start and a start of the segment and (b) an address offset indicating a size of a portion between the file start and an end of the segment, or (2-2) (a) an address offset indicating a size of a portion between the file start and a start of the segment and (c) a size of the segment.
4. (Original) The file management apparatus of Claim 3, wherein  
the position information storage unit stores the pieces of position information in the same order as the segments for each file, and  
the file management apparatus further comprising:  
a receiving unit operable to receive a segment name obtainment request; and  
a segment name output unit operable to, after the receiving unit receives the segment name obtainment request, refer to the position information storage unit and output to outside the file management apparatus a list of segment names which each include at least (1) a file name of a file to which the segment belongs and (2) a character sequence which indicates a position of the segment in one or more segments belonging to the file.
5. (Original) The file management apparatus of Claim 4, wherein  
the position information storage unit stores a table showing relationships between (1) file names of files to which the segments belong, (2) serial numbers of the segments in the files which are assigned in order of storage in the files, and (3) pieces of position information, and  
the position information read unit, after receiving a segment name, refers to the table to detect a piece of position information that corresponds to a file name and a serial

number of the segment which are included in the segment name, and reads the detected piece of position information from the table.

6. (Previously Presented) The file management apparatus of Claim 32, wherein the piece of numerical information contained in each piece of data stored in the file storage unit is a timecode, and the file storage unit further stores, as an entry that corresponds to a file name of the file, position information that indicates a storage position of the file in the file storage unit, the file management apparatus further comprising:
  - an access request receiving unit operable to receive an access request specifying an access target name which is either a segment name or a file name;
  - a judgement unit operable to judge whether the access target name is a segment name or a file name;
  - a position information read unit operable to read, from either the first position information storage unit or the second position information storage unit, a piece of position information corresponding to the access target name judged by the judgement unit; and
  - an access unit operable to access either a segment or a file stored in the file storage unit by referring to the read piece of position information.
7. (Original) The file management apparatus of Claim 6, wherein
  - the judgement unit judges that the access target name is a segment name when the access target name includes a name of a file stored in the file storage unit and a character sequence indicating a serial number of a segment in the file.

8. (Previously Presented) The file management apparatus of Claim 32 further comprising:
  - a file obtaining unit operable to obtain files which each include a plurality of pieces of video data that have each been assigned a timecode, and store the obtained files in a file storage unit;
  - a segment access request receiving unit operable to receive a segment access request specifying a segment;
  - a position information read unit operable to read, from the position information storage unit, a piece of position information corresponding to the segment specified in the segment access request; and
  - a segment access unit operable to access the segment in the file storage unit by referring to the read piece of position information.
9. (Previously Presented) The file management apparatus of Claim 32 further comprising:
  - a file obtaining unit operable to obtain files which each include a plurality of pieces of video data that have each been assigned a timecode, and store the obtained files in a file storage unit;
  - a segment access request receiving unit operable to receive a segment access request specifying a segment;
  - a position information read unit operable to read, from the position information storage unit, a piece of position information corresponding to the segment specified in the segment access request; and
  - a segment access unit operable to access the segment in the file storage unit by referring to the read piece of position information.

10. (Previously Presented) The file management apparatus of Claim 34 further comprising:
  - an access request receiving unit operable to receive a segment set access request specifying a segment set name, each segment set being composed of all segments in a file, and each segment set name including a name of the file and a character sequence unique to segment set names;
  - a position information read unit operable to identify a file to which a segment set corresponding to the specified segment set name belongs, and read, from the position information storage unit, pieces of position information corresponding to all segments belonging to the identified file, recognizing the read pieces of position information as a piece of position information of the segment set; and
  - a segment set access unit operable to access the segment set in the file storage unit by referring to the piece of position information of the segment set.
11. (Original) The file management apparatus of Claim 10, wherein each piece of segment position information includes (1) an address indicating a file start storage position of a file to which the segment belongs, and either (2-1) (a) an address offset indicating a size of a portion between the file start and a start of the segment and (b) an address offset indicating a size of a portion between the file start and an end of the segment, or (2-2) (a) an address offset indicating a size of a portion between the file start and a start of the segment and (c) a size of the segment.
12. (Original) The file management apparatus of Claim 11 further comprising:
  - a receiving unit operable to receive a segment set name obtainment request; and
  - a segment set name output unit operable to, after the receiving unit receives the segment set name obtainment request, refer to the position information storage unit and output to outside the file management apparatus a list of segment set names which

each include (1) a file name of a file to which the segment set belongs and (2) a character sequence unique to segment set names.

13. (Previously Presented) The file management apparatus of Claim 12, wherein  
each piece of data includes a piece of video data to which a timecode has been assigned;  
and  
the segment judging unit judges whether two timecodes assigned to two pieces of video data are continuous.
14. (Previously Presented) The file management apparatus of Claim 34 further comprising:  
an access request receiving unit operable to receive an access request specifying an access target name;  
a judgement unit operable to judge whether the access target name is a segment set name or a file name, each segment set being a set of all segments included in one file;  
a position information read unit operable to read, from either the file storage unit – or the position information storage unit, a piece of position information corresponding to the access target name judged by the judgement unit; and  
an access unit operable to access either a segment set or a file stored in the file storage unit by referring to the read piece of position information.
15. (Original) The file management apparatus of Claim 14, wherein  
the judgement unit judges that the access target name is a segment set name when the access target name includes a name of a file stored in the file storage unit and a character sequence unique to segment set names.

16. (Previously Presented) The file management apparatus of Claim 32, wherein the position information storage unit stores position information that indicates a position of a free space storing no data, the file management apparatus further comprising: an add request receiving unit operable to receive a segment add request which requests to add a new segment to a file;
- a segment obtaining unit operable to obtain a new segment;
- a position information read unit operable to read, from the position information storage unit, a piece of free space position information; and
- a segment add unit operable to add the new segment to the file storage unit by referring to the read piece of free space position information.
17. (Previously Presented) The file management apparatus of Claim 32, wherein the position information storage unit stores position information that indicates a position of a free space storing no data, the file management apparatus further comprising: an add request receiving unit operable to receive a segment set add request specifying (1) an add destination file and (2) a source file including a segment set which is to be added to the add destination file;
- a position information read unit operable to read, from the position information storage unit, a piece of free space position information indicating a position of a free space of the specified add destination file;
- a segment set extract unit operable to extract all segments included, in the source file as a segment set by referring to the pieces of segment position information stored in the position information storage unit; and
- a segment set add unit operable to add the extracted segment set to the free space by referring to the read piece of free space position information.

18. (Previously Presented) The file management apparatus of Claim 32, wherein
- the position information storage unit stores position information that indicates a position of a free space storing no data, the file management apparatus further comprising:
- an add request receiving unit operable to receive a file add request specifying (1) an add destination file and (2) a source file which is to be added to the add destination file;
- a position information read unit operable to read, from the position information storage unit, a piece of free space position information indicating a position of a free space of the specified add destination file;
- a file add unit operable to add the source file to the free space by referring to the read piece of free space position information.
19. (Previously Presented) The file management apparatus of Claim 34 further comprising:
- an access request receiving unit operable to receive a segment partial set access request specifying a file name and a condition, each segment partial set being a set of one or more segments in one file;
- a position information read unit operable to read, from the position information storage unit, pieces of position information corresponding to all segments belonging to the specified file and satisfying the specified condition, recognizing the read pieces of position information as a piece of position information of the requested segment partial set; and
- a segment partial set access unit operable to access the segment partial set by referring to the piece of position information of the segment partial set.



20. (Previously Presented) The file management apparatus of Claim 19, wherein each piece of data includes a piece of video data to which a timecode has been assigned, and the segment judging unit judges whether two timecodes assigned to two pieces of video data are continuous.
- 21-30. (Cancelled)
31. **(Currently Amended)** A file management apparatus for managing files stored therein, comprising:
- a file storage unit operable to store a file that contains two pieces of data, each piece of data being video data and containing a piece of numerical information being a time code;
  - a segment judging unit operable, for each file stored in the file storage unit, to read the two pieces of data, extract two pieces of numerical information being time codes respectively from the read two pieces of data, and judge whether the two time codes ~~pieces of numerical information~~ are continuous in time series; and
  - a segment generating unit operable, if the segment judging unit judges that the two time codes ~~pieces of numerical information~~ are continuous, to generate a segment that contains the read two pieces of video data.
32. (Previously Presented) The file management apparatus of Claim 31, wherein the segment generating unit includes:
- a position information storage unit;
  - a position obtaining unit operable, if the segment judging unit judges that the two pieces of numerical information are continuous, to obtain two pieces of position information respectively of the two pieces of data from the file storage unit; and

a position information write unit operable to, recognizing the two pieces of data as the segment, generate a segment name for identifying the recognized segment, and write into the position information storage unit (ii) the segment name and (ii) the two pieces of position information as an entry that corresponds to the segment name, the two pieces of position information indicating a storage position of the segment.

33. (Previously Presented) The file management apparatus of Claim 32, wherein if the segment judging unit judges that the two pieces of numerical information are not continuous, the segment generating unit generates a segment that contains one of the read two pieces of data, and generates another segment that contains the other of the read two pieces of data.
34. (Previously Presented) The file management apparatus of Claim 33, wherein if the segment judging unit judges that the two pieces of numerical information are not continuous, the position obtaining unit obtains two pieces of position information respectively of the two pieces of data from the file storage unit, and the position information write unit, recognizing the two pieces of data as two different segments, generates two segment names for identifying the two segments, and writes into the position information storage unit (i) the two segment names and (ii) the two pieces of position information as entries that respectively correspond to the two segment names, the two pieces of position information indicating storage positions of the two segments, respectively.

35. **(Currently Amended)** A file management method for use in a file management apparatus for managing files stored in a file storage unit thereof, wherein each of the files stored in the file storage unit contains two pieces of video data which each contain a time code ~~piece of numerical information~~, the file management method comprising:

a segment judging step for, for each file stored in the file storage unit, reading the two pieces of video data, extracting two time codes ~~pieces of numerical information~~ respectively from the read two pieces of video data, and judging whether the two time codes ~~pieces of numerical information~~ are continuous in time series; and

a segment generating step for, if the segment judging step judges that the two time codes ~~pieces of numerical information~~ are continuous, generating a segment that contains the read two pieces of video data.

36. **(Currently Amended)** The file management method of Claim 35, wherein the file management apparatus further includes a position information storage unit, and the segment generating step includes:

a position obtaining step for, if the segment judging step judges that the two time codes ~~pieces of numerical information~~ are continuous, obtaining storage positions of the two pieces of video data from the file storage unit; and

a position information write step for, recognizing the two pieces of video data as a segment, generating a segment name for identifying the recognized segment, and writing into the position information storage unit (i) the segment name and (ii) the two pieces of position information as an entry that corresponds to the segment name, the two pieces of position information indicating [a] storage positions ~~position~~ of the segment.

37. **(Currently Amended)** The file management method of Claim 36, wherein  
if the segment judging step judges that the two time codes ~~pieces of numerical  
information~~ are not continuous, the segment generating step generates a segment  
that contains one of the read two pieces of video data, and generates another  
segment that contains the other of the read two pieces of video data.
38. **(Currently Amended)** The file management method of Claim 37, wherein  
if the segment judging step judges that the two time codes ~~pieces of numerical  
information~~ are not continuous, the position obtaining step obtains storage  
positions of the two pieces of video data from the file storage unit, and  
the position information write step, recognizing the two pieces of video data as two  
different segments, generates two segment names for identifying the two  
segments, and writes into the position information storage unit (i) the two  
segment names and (ii) the two pieces of position information as entries that  
respectively correspond to the two segment names, the two pieces of position  
information indicating storage positions of the two segments, respectively.
39. **(Currently Amended)** A computer-readable recording medium that stores a file  
management program for use in a file management apparatus for managing files stored in  
a file storage unit thereof, wherein each of the files stored in the file storage unit contains  
two pieces of video data, each piece of video data containing a time code ~~which each  
contain a piece of numerical information~~, the file management program comprising:  
a segment judging step for, for each file stored in the file storage unit, reading the two  
pieces of video data, extracting two time codes ~~pieces of numerical information~~  
respectively from the read two pieces of video data, and judging whether the two  
time codes ~~pieces of numerical information~~ are continuous in time series; and

a segment generating step for, if the segment judging step judges that the two time codes ~~pieces of numerical information~~ are continuous, generating a segment that contains the read two pieces of video data.

40. **(Currently Amended)** The computer-readable recording medium of Claim 39, wherein the file management apparatus further includes a position information storage unit, and the segment generating step includes:

a position obtaining step for, if the segment judging step judges that the two time codes ~~pieces of numerical information~~ are continuous, obtaining storage positions of the two pieces of video data from the file storage unit; and  
a position information write step for, recognizing the two pieces of video data as a segment, generating a segment name for identifying the recognized segment, and writing into the position information storage unit (i) the segment name and (ii) the two pieces of position information as an entry that corresponds to the segment name, the two pieces of position information indicating [a] storage ~~positions~~ position of the segment.

41. **(Currently Amended)** The computer-readable recording medium of Claim 40, wherein if the segment judging step judges that the two time codes ~~pieces of numerical information~~ are not continuous, the segment generating step generates a segment that contains one of the read two pieces of video data, and generates another segment that contains the other of the read two pieces of video data.

42. **(Currently Amended)** The computer-readable recording medium of Claim 41, wherein if the segment judging step judges that the two time codes ~~pieces of numerical information~~ are not continuous, the position obtaining step obtains storage positions of the two pieces of video data from the file storage unit, and the position information write step, recognizing the two pieces of video data as two different segments, generates two segment names for identifying the two segments, and writes into the position information storage unit (i) the two segment names and (ii) the two pieces of position information as entries that respectively correspond to the two segment names, the two pieces of position information indicating storage positions of the two segments, respectively.
43. **(New)** A file management system having at least one video data file comprising a plurality of pieces of video data, with at least some pieces of the plurality of pieces of video data each comprising a time code wherein:
- the file management system groups the plurality of pieces of video data into video segments by scanning the file for discontinuities between time codes of pieces of video data;
- the file management system associates a unique segment name with each video segment within the file such that each segment name can be used to read or replace the associated segment within the file.

44. (New) The file management system of Claim 43 wherein the file management system associates a file name with the video data file, and each segment name comprises the file name of the video data file and a serial number unique to that segment within the data file.
45. (New) The file management system of Claim 44 wherein the file management system provides read and write access to an individual video segment within the video data file via the associated segment name.